



CITY OF KIRKLAND

Department of Public Works

123 Fifth Avenue, Kirkland, WA 98033 425.587.3800

www.ci.kirkland.wa.us

MEMORANDUM

To: Kurt Triplett, City Manager

From: David Godfrey, P.E., Transportation Engineering Manager
Ray Steiger, P.E., Interim Public Works Director

Date: March 24, 2011

Subject: Monitoring of SR 520 Tolling effects

RECOMMENDATION

It is recommended that the Council approve the proposed monitoring plan and allocate an amount not to exceed \$5000 from the Street Improvement Reserve Fund for additional traffic counts.

BACKGROUND

Tolling on the SR 520 bridge will likely begin in May or June of 2011. Before tolling can begin, the legislature has to approve a toll rate schedule ([proposed toll rate schedule](#)), and the Washington State Department of Transportation (WSDOT) must subsequently complete various technical and outreach tasks. WSDOT staff anticipates that tolling will begin no earlier than six weeks after the legislature acts.

It is likely that a toll on SR 520 will lead to changes in travel behavior. Drivers may use alternate routes, change the time of day they travel, or use other modes of travel. Drivers may make several changes as they find what works best for them. Based on the experience of toll introduction in other locations in the country, WSDOT expects that driver behavior will potentially make large changes in the first few months of tolling as drivers try different strategies. WSDOT believes it may be six months before travel patterns settle down.

Changes in traffic patterns may affect City of Kirkland streets because of driver's new behaviors in response to tolling. Diversion to SR 522 and I-90 are the most likely changes in driving patterns to impact Kirkland. City staff has been working with WSDOT, other affected cities, and King County over the last few months to develop a coordinated monitoring plan so that changes in traffic volumes can be measured. Each agency is sharing data with the others to develop a clear regional picture of traffic volume before and after tolling implementation. Map 1 shows selected count locations that are being monitored.

For Kirkland, the key routes to be monitored are:

- I-405 and associated ramps in Kirkland
- SR 520 and associated ramps in Kirkland
- Lake Washington Boulevard-Lake Street-Market Street-100th Avenue
- 124th Avenue NE
- 108th Avenue NE
- Juanita Drive
- Simonds Road

Counts will come from several sources including City of Kirkland, WSDOT, King County, and other cities.

Kirkland's counts will be mainly from Kirkland's normal "seasonal counts" that are taken annually in February, May, August, and November. Seasonal counts gather volume data each hour for seven days at locations shown on Map 1. The February 2011 counts serve as before tolling counts on Kirkland streets. If tolling begins in May, Kirkland will make its May seasonal counts after tolling begins, and this will serve the purpose of giving an initial "after" count. If tolling begins in June or later, staff will schedule a separate set of counts to be made immediately after tolling begins. An extra set of seasonal counts will be scheduled for September to provide an after count that captures the effects of school traffic. Together, the "extra" seasonal counts are estimated to cost less than \$5000. Normal seasonal counts will be completed in August and November to help further understand any volume changes.

WSDOT has extensive monitoring systems on the freeways and freeway ramps. Travel time and volume data are available on SR 522 from monitoring equipment that has been installed in anticipation of tolling. In addition, WSDOT is placing counters at other key locations for two-week counts before tolling and at the same locations one week per month after tolling begins. The after counts will continue until tolling effects have settled out. Kirkland area WSDOT counts are shown on Map 1.

After tolling begins, WSDOT is planning to present daily reports that include detailed information about a number of factors such as daily volume, hourly volume, travel times, and congestion. Example elements of the daily report are shown in Figures 1 and 2 of this memo. Map 2 shows the 13 locations for regional freeway monitoring, one of which is on I-405 north of NE 85th Street. Additional information, beyond that in the daily report, will also be available on request.

King County has counting facilities on 100th Avenue and Juanita Drive that will be owned and maintained by the City of Kirkland after annexation. The City of Kenmore has counted and will continue to count Simonds Road each month. King County Metro makes regular passenger counts on all of its routes, and the group of agencies working on measuring traffic volume changes will be working with Metro to integrate ridership changes into the data collection efforts.

WSDOT is funding extra before and after counts in Kirkland, but they do not have funding currently allocated for mitigation of any affects of diversion that may occur. Funds collected by tolls cannot be used for mitigation without the approval of the State Legislature. Unfortunately, because the 2011 session is drawing to a close, such a decision by the legislature will likely have to be made during the 2012 session.

If there is a sustained impact due to tolling, the definition of which has yet to be determined, a number of tools could be used to mitigate impacts including:

- Signal timing changes
- Promotion of alternative routes and modes through Kirkland based outlets; this could include dissemination of information through signing, press releases, emails, Commute Trip Reduction affected employers, etc.
- Participation with other agencies to address multi-jurisdictional issues; examples may include working with Metro, WSDOT or aligning our information messaging with other cities.
- Study and development of other medium and long term mitigation strategies, including the potential use of the BNSF Corridor in Kirkland for bicycle/pedestrian and mass transit capacity through Kirkland.

SR 520 Tolling: Traffic Monitoring

Hourly Volumes

Wednesday, February 16, 2011

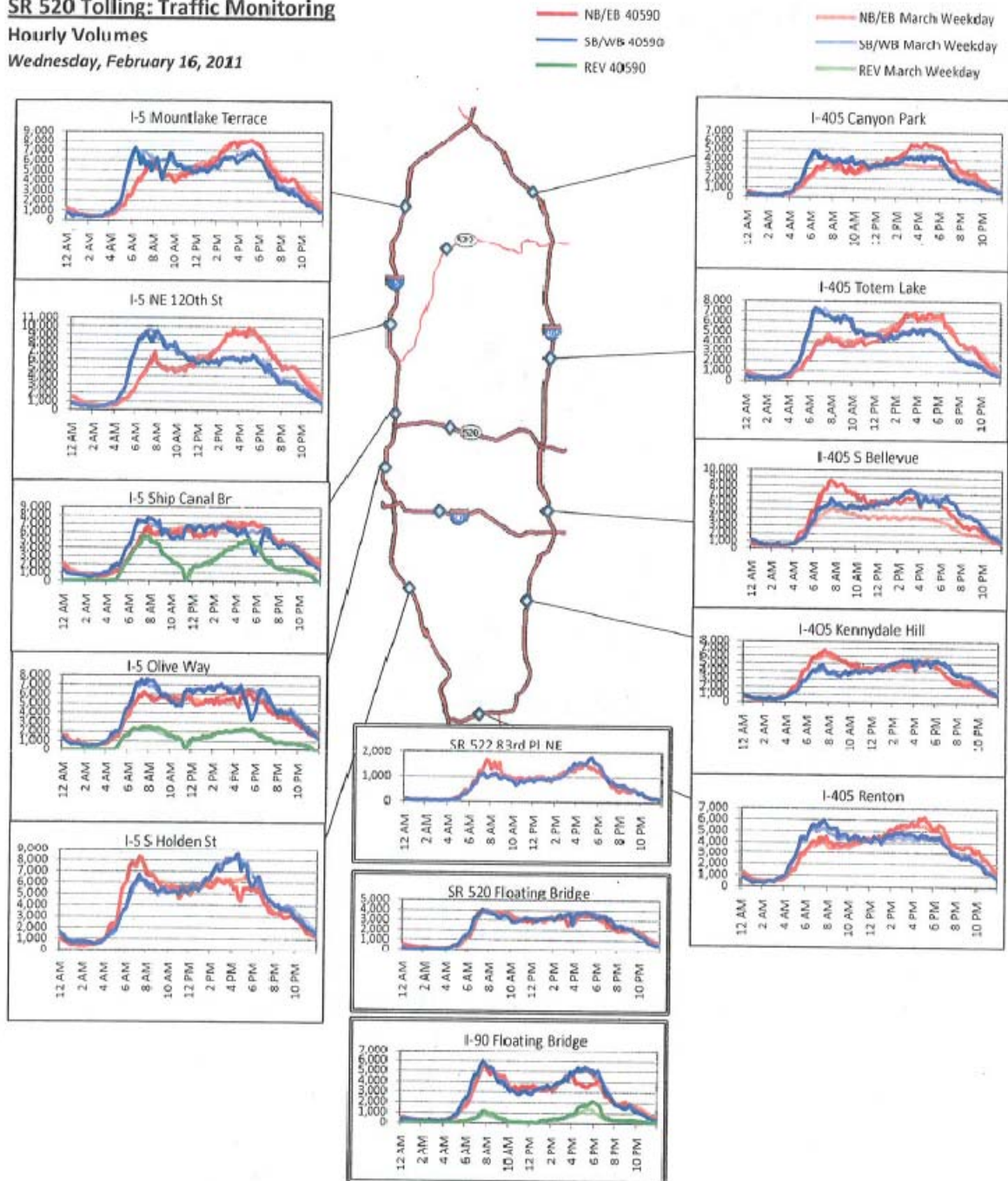


Figure 1 Sample portion of WSDOT daily report showing directional volume at various sites.

SR 520 Tolling: Traffic Monitoring Daily Volumes

Wednesday, February 16, 2011

% change 2/16/11 March weekday	above range of typical variation	below range of typical variation
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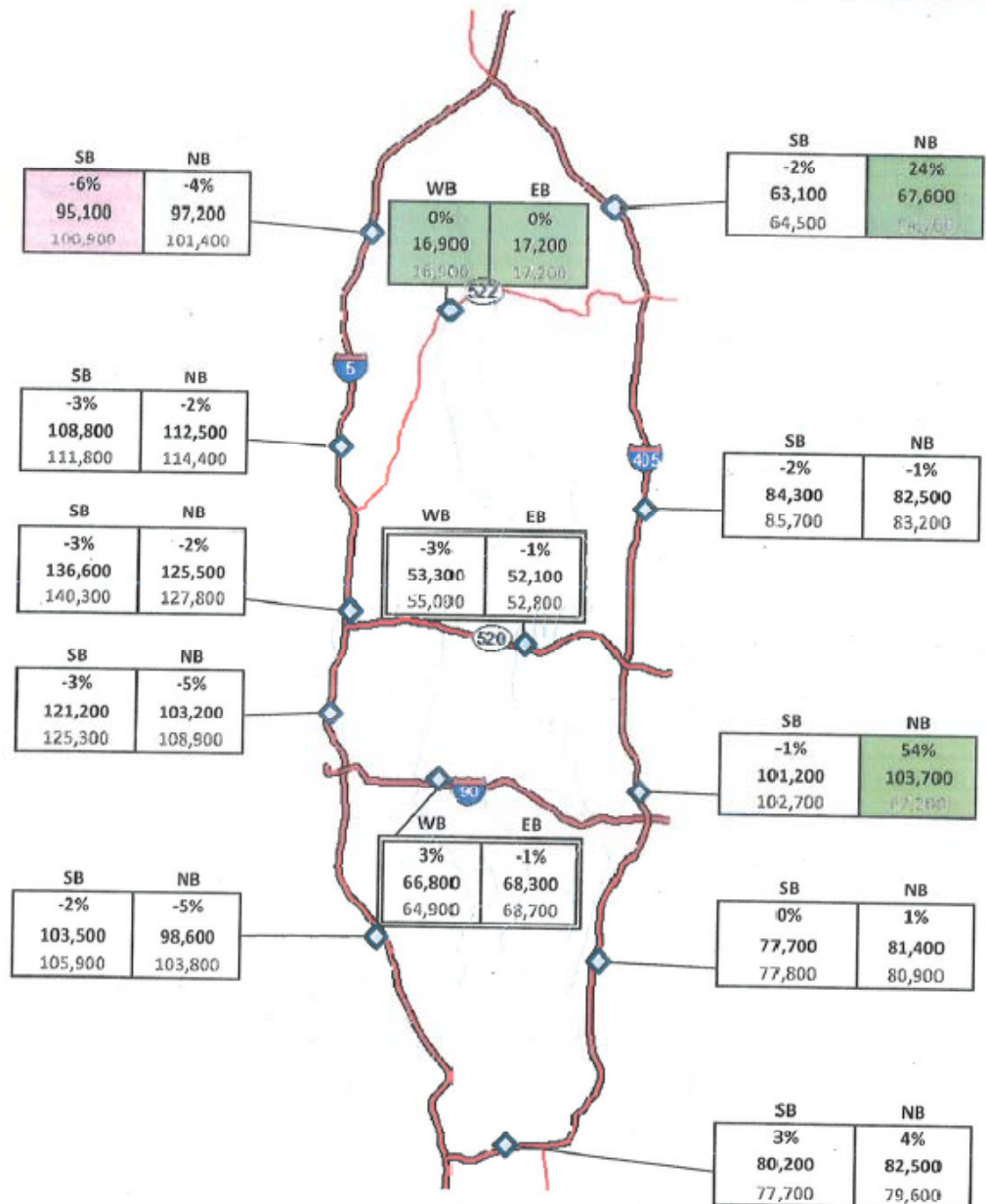


Figure 2 Sample portion of WSDOT daily report showing daily volume and changes from typical volume.

Some measures are currently available to assist with potential impacts. City of Kirkland marketing efforts in the Totem Lake Growth and Transportation Efficiency Center (GTEC) already includes a coordinated effort to offer transit, carpool, and vanpool options to crossing the SR 520 Bridge after tolling begins, and King County Metro has increased frequency of the Route 255 in order to offer additional ridership options.

Besides traffic pattern shifts, Park and Ride lots in Kirkland may also see increased use as those crossing the SR 520 Bridge seek transit options. This may lead to increased parking on local public streets resulting in concern from those who live on such streets. Designation of no-parking zones may be possible on some streets although such zones would likely also affect residents as well as those parking to use buses. Residential parking zones would be one way of limiting parking by non-residents. The administration and enforcement of such zones would require labor and funding beyond what is currently in the budget. It may also be possible to encourage people to park on major streets where the impact of parking is less acute or encourage them to reach transit without an additional car trip.

The changes in travel behavior due to tolling may vary widely from day to day after tolling first begins, and to attempt to predict the exact results are premature. Experience with this type of major system change indicates that the most prudent response is to continually monitor the situation and wait for travel patterns to be established prior to identifying and instituting any major actions.

Map 1 Count locations for Monitoring SR 520 Tolling Impacts

Vicinity Map

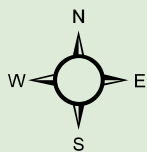


Legend

Regional Count Locations

Agency, Type

- Kenmore, Tube
- + King County, ITS
- ▲ King County, Permanent
- Kirkland, Seasonal
- WSDOT, Interchange
- ◆ WSDOT, Report
- WSDOT, Tube



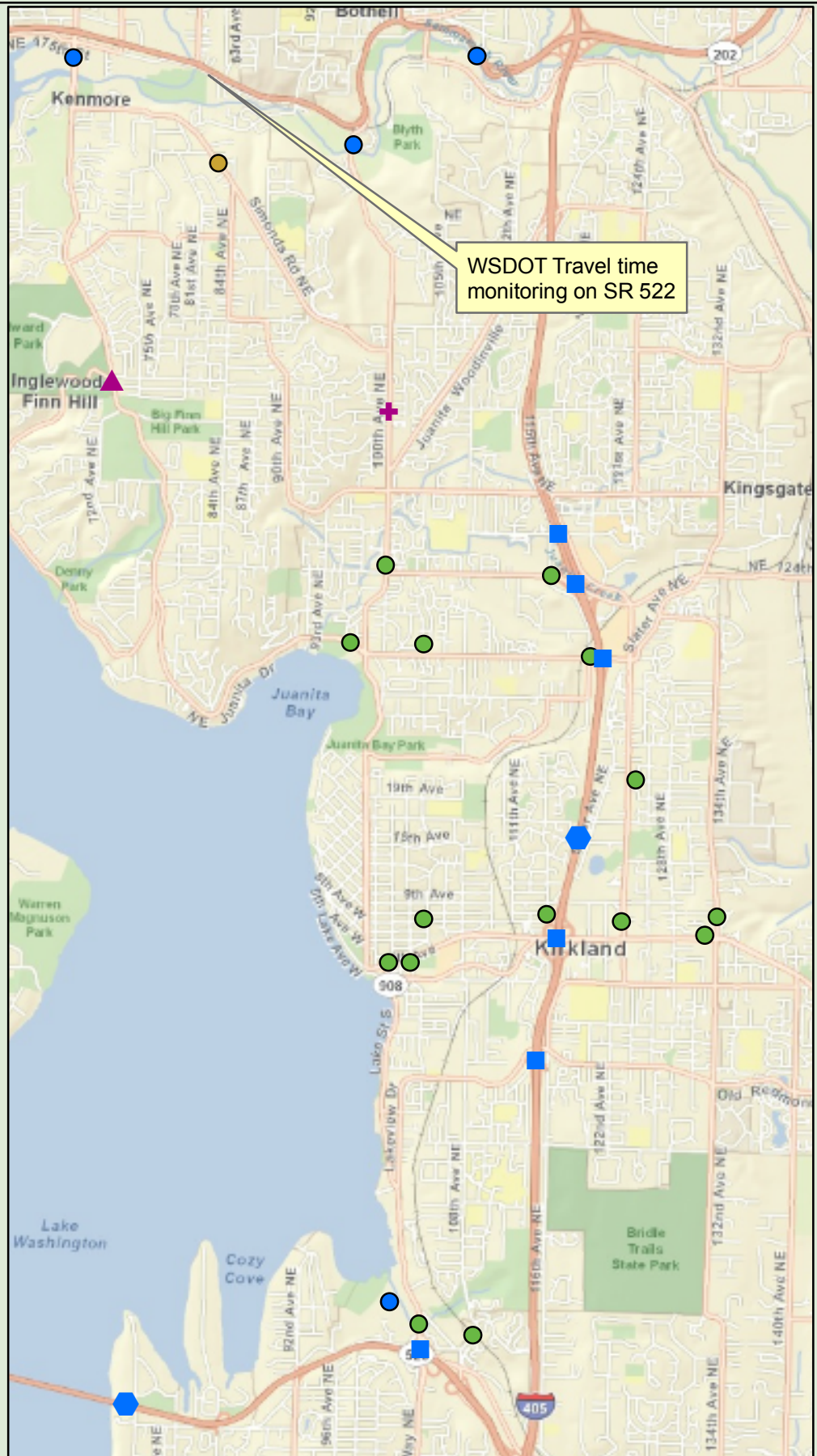
0 2,700 5,400 Feet



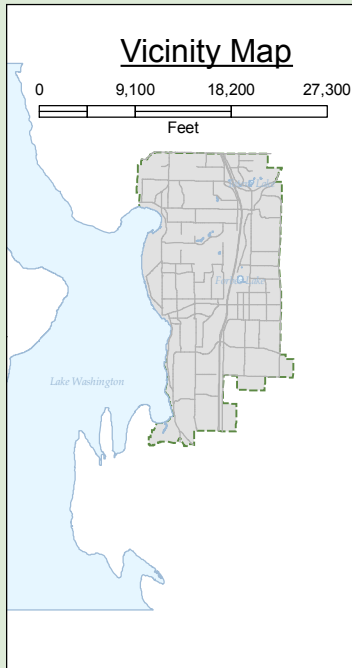
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-Print Date: 3/24/2011

-Location: \\SRV-FILE02\users\DGodfrey\DATA\SR 520\regional map.mxd

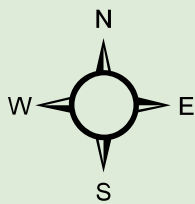


Map 2 WSDOT Monitoring Locations for Daily Reports



Legend

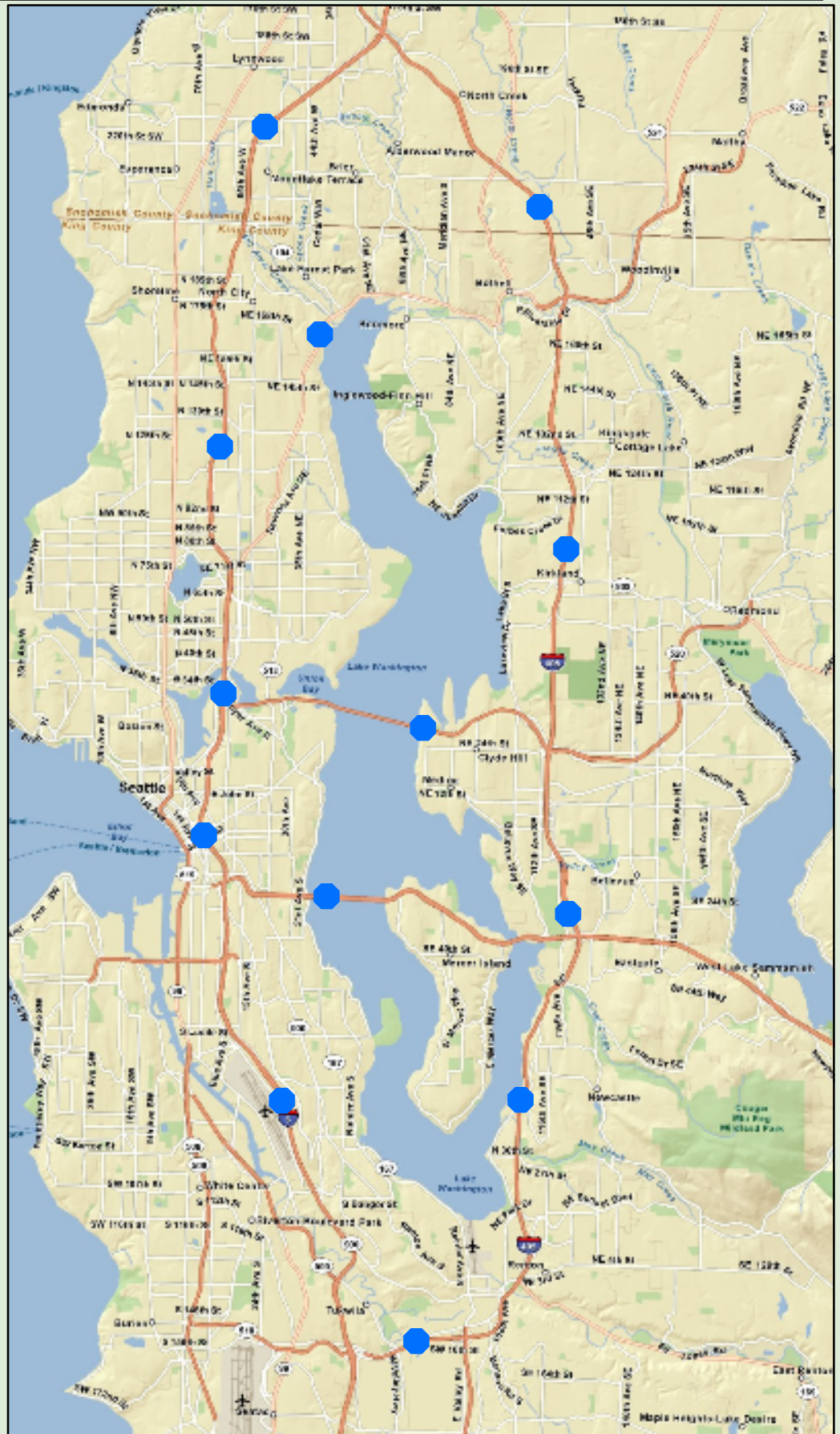
- WSDOT, Report
- World Street Map



0 8,000 16,000 Feet



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FISCAL NOTE*CITY OF KIRKLAND*

Source of Request							
Ray Steiger, Interim Public Work Director							
Description of Request							
Request for funding of \$5,000 from the Street Improvement Reserve for traffic counts to monitor the change in traffic patterns from the impact of SR 520 tolling.							
Legality/City Policy Basis							
Fiscal Impact							
One-time use of \$5,000 from the Street Improvement Reserve. The reserve is able to fully fund this request.							
Recommended Funding Source(s)							
<i>Reserve</i>	Description	2012 Est End Balance	Prior Auth. 2011-12 Uses	Prior Auth. 2011-12 Additions	Amount This Request	Revised 2012 End Balance	2012 Target
	Street Improvement Reserve	1,215,693	0	0	5,000	1,210,693	N/A
<i>Revenue/Exp Savings</i>							
<i>Other Source</i>							
Other Information							

Prepared By	Neil Kruse, Senior Financial Analyst	Date	March 28, 2011
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